REMARKS

This Amendment responds to the Office Action dated January 28, 2005 in which the Examiner rejected claims 1-4, 6, 9-12, 14, 16 and 19-21 under 35 U.S.C. §102(b) and rejected claims 5, 7, 8, 13, 15, 17 and 18 under 35 U.S.C. §103.

As indicated above, minor informalities in the specification have been corrected. Applicant respectfully requests the Examiner approves the correction.

As indicated above, claim 1 has been amended to incorporate claim 4, claim 9 has been amended to incorporate part of claim 12 and claim 16 has been amended to incorporate claim 17. The amendment is unrelated to a statutory requirement for patentability.

Claim 1 claims a stator core, claim 9 claims a core back and claim 16 claims a method for producing a stator core. The stator core comprises a core back and a plurality of teeth. The plurality of teeth are arranged circumferentially on the core back and extend radially therefrom. The core back is at least one sheet of electrically insulated soft magnetic material arranged as a spiral. The core back includes openings for receiving the teeth.

Through the structure and method of the claimed invention having a core back including openings for receiving a plurality of teeth as claimed in claims 1, 9 and 16, the claimed invention provides a stator core, core back and method of producing a stator core which improves the magnetic flux which will flow from each turn of the spiral core to a tooth. The prior art does not show, teach or suggest the invention as claimed in claims 1, 9 and 16.

Claims 1-4, 6, 9-12, 14, 16 and 19-21 were rejected under 35 U.S.C. §102(b) as being anticipated by *Workman* (U.S. Patent No. 4,698,539).

Workman appears to disclose a pole-supporting structure in a rotating D.C. electric motor or generator (hereinafter referred to for simplicity as "D.C. motors"). (col. 1, lines 13-15) As seen in FIGS. 2 and 3, the stator assembly comprises poles 14 and antipoles 15 secured by bolts 16 to a pole-supporting structure or yoke 13. (col. 3, lines 3-5) The yoke 13 is formed, as will be described in greater detail hereinafter, from a single strip of magnetic material coiled on a mandrel and secured into a monolithic unit, for example by an adhesive between the turns of the coil or by welding the ends 19, 20 of the coil. (col. 3, line 11-15) The yoke is formed on a mandrel 1 which in FIG. 4 is a cylindrical mandrel for forming a cylindrical yoke. A strip 10 of magnetic material such as annealed mild steel fed from a supply roll 9 is moved by guide rollers 7 through a degreasing fluid 8, between slitting cutters 5,6 between coating applicator rollers 3,4 and is wound around the mandrel 1, the leading edge of the strip 10 being trapped in a slit 2, in the surface of the mandrel 1. (col. 3, lines 28-38) The slitting cutters 5,6 are arranged to provide sets of adjacent slits 11 spaced by margins 12 from the edge of the strip 10 and mutually spaced by a distance A (FIG. 5) which is substantially equal to the distance along the magnetic path between adjacent poles (either main poles or interpoles) of the D.C. machine. (col. 3, lines 48-53) The coiled yoke 13 may be produced without the slits 11 shown in FIG. 5 but in this event the magnetic flux passing through each of the poles requires to traverse the laminations formed by coils of the yoke 13 in order to pass along the yoke 13 to the adjacent pole. Rapid changes in the pole flux may give rise to eddy currents where the flux passes through the wound laminated structure in a direction perpendicular to the plane of the laminations and for this reason it is preferred to introduce the slits 11. The slits 11 also mitigate the effects of eddy

currents arising due to the D.C. supply being achieved by rectification of an A.C. supply. (col. 3, line 63 through col. 4, line 6)

Thus, *Workman* merely discloses securing poles 14 and anti-poles 15 by bolts 16 to a yoke 13. Thus, nothing in *Workman* shows, teaches or suggests openings in a core back for receiving teeth as claimed in claims 1, 9 and 16. Rather, *Workman* teaches away from the claimed invention since the yoke 13 only has bolts 16 pass therethrough in order to secure the poles 14 and anti-poles 15 on the inside surface of yoke 13 (i.e., the pole/teeth are connected to the yoke 13 by bolts versus receiving teeth in openings).

Since *Workman* merely discloses attaching a pole to the stator by means of a bolt and does not show, teach or suggest a core back including openings for receiving teeth as claimed in claims 1, 9 and 16, applicant respectfully requests the Examiner withdraws the rejection to claims 1, 9 and 16 under 35 U.S.C. §102(b).

Claims 2-3, 6, 10-12, 14, and 19-21 depend from claims 1, 9 and 16 and recite additional features. Applicants respectfully submits that claims 2-3, 6, 10-12, 14 and 19-21 would not have been anticipated by *Workman* within the meaning of 35 U.S.C. §102(b) at least for the reasons as set forth above. Therefore, applicant respectfully requests the Examiner withdraws the rejection to claims 2-3, 6, 10-12, 14 and 19-21 under 35 U.S.C. §102(b).

Claims 5, 8, 13 and 15 were rejected under 35 U.S.C. §103 as being unpatentable over *Workman*.

Applicant respectfully traverses the Examiner's rejection of the claims under 35 U.S.C. §103. The claims have been reviewed in light of the Office Action, and for

reasons which will be set forth below, applicant respectfully requests the Examiner withdraws the rejection to the claims and allows the claims to issue.

As discussed above, since nothing in *Workman* shows, teaches or suggests the primary features as claimed in claims 1 and 9, applicant respectfully submits that *Workman* would not have been obvious at least for the reasons as set forth above. Therefore, applicant respectfully requests the Examiner withdraws the rejection to claims 5, 8, 13 and 15 under 35 U.S.C. §103.

Claims 7, 17 and 18 were rejected under 35 U.S.C. §103 as being unpatentable over *Workman* in view of *Jack et al* (U.S. Patent No. 6,472,792).

Applicant respectfully traverses the Examiner's rejection of the claims under 35 U.S.C. §103. The claims have been reviewed in light of the Office Action, and for reasons which will be set forth below, applicant respectfully requests the Examiner withdraws the rejection to the claims and allows the claims to issue.

Since nothing in *Workman* shows, teaches or suggests the primary features as claimed in claims 1 and 16, applicant respectfully submits that the combination of the primary reference with the secondary reference to *Jack et al* would not overcome the deficiencies of the primary reference. Also, *Jack et al.* discloses force fitting teeth in a stator made of plural sections, which is a different technical field than the stator disclosed in *Workman*. Applicant respectfully submits that a person of skill in the art would not modify *Workman* by a) removing the bolt, b) extending the teeth for connection to the core back and c) provide opening for the teeth in the core back. Furthermore, the poles in *Workman* are made from a stacked plate and in *Jack et al.* the teeth are made of soft magnetic composites. Therefore, the combination of the

references is not possible. Therefore, applicant respectfully requests the Examiner withdraws the rejection to claims 7 and 18 under 35 U.S.C. §103.

New claims 22-24 have been added and recite additional features. Applicant respectfully submits that these claims are also in condition for allowance.

Thus it now appears that the application is in condition for reconsideration and allowance. Reconsideration and allowance at an early date are respectfully requested.

If for any reason the Examiner feels that the application is not now in condition for allowance, the Examiner is respectfully requested to contact, by telephone, the applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed within the currently set shortened statutory period, applicant respectfully petitions for an appropriate extension of time. The fees for such extension of time may be charged to our Deposit Account No. 02-4800.

In the event that any additional fees are due with this paper, please charge our Deposit Account No. 02-4800.

Respectfully submitted,

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